DOCUMENT RESUME

ED 075 008 JC 730 078

TITLE	Clackamas Community College Master Planning Program. Final Report.
INSTITUTION	Thompson Associates, Redwood City, Calif.
SPONS AGENCY	Clackamas Community Coll., Oregon City, Oreg.
PUB DATE	31 Jan 73
NOTE	68p.
EDRS PRICE	MF-$0.65 HC-$3.29
DESCRIPTORS	*Campus Planning; *College Planning; Community Colleges; *Educational Facilities; *Master Plans; Post Secondary Education; School Community Relationship; Technical Reports
IDENTIFIERS	*Clackamas Community College; Oregon

ABSTRACT

A study aimed at the development of alternative solutions to building and campus planning problems of the Clakamas Community College (Oregon City, Oregon) is reported. The two main objectives of the study were: (1) to evaluate the current proposed solution (Community Center Building) to the college's need for a community/student center facility; and (2) to review and study the existing long-range plan with the objectives of: evaluating the established ultimate campus size or capacity on which the present long-range plan has been based; review the existing educational specifications; and develop a revised long-range plan which includes a tentative construction schedule. The sections of the report are: Summary and General Recommendations; Community Center Building; Master Planning Program; Existing Space Utilization; Enrollment Projections; Training; Long-Range Facilities Planning; and Appendix A (Letters and Planning Matrix). (DB)

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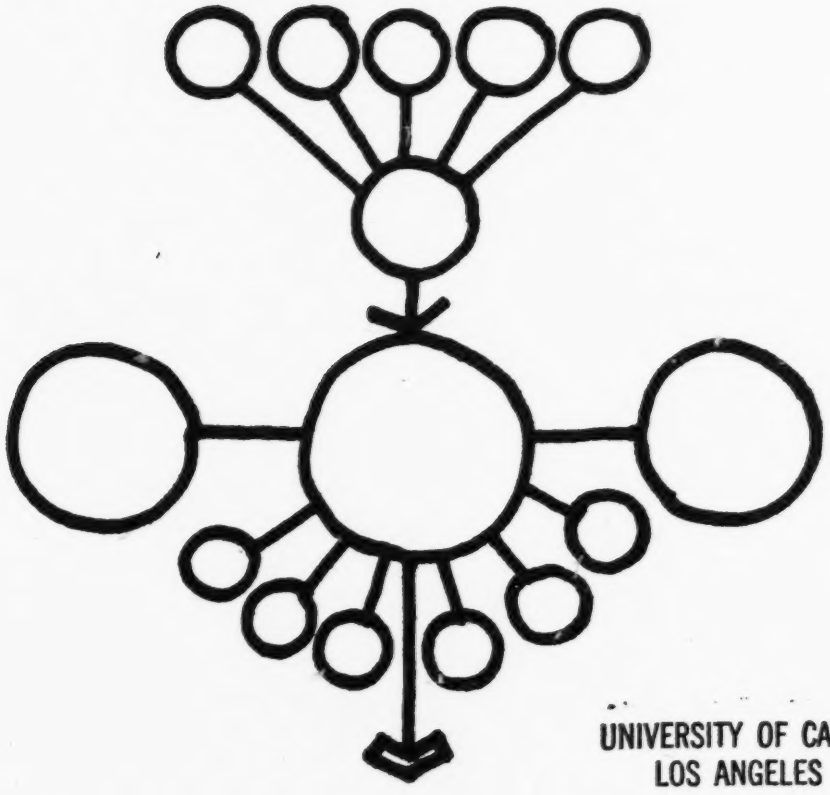
CLACKAMAS COMMUNITY COLLEGE
FINAL REPORT

January 31, 1973

thompson associates

ED 075008

MASTER PLANNING PROGRAM



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January 31, 1973

Board of Education
Clackamas Community College
19600 South Molalla Avenue
Oregon City, Oregon 97045

Dear Members of the Board:

For the past three months, it has been our pleasure to work with the Clackamas Community College staff in the development of alternative solutions to building and campus planning problems. We have enjoyed working with a large segment of the college community and appreciate the cooperation given to our planning team.

The following report summarizes our activities during this period, and proposes some recommendations regarding the Community Center Building and the Master Planning Program. Except where specifically noted, these recommendations are the results of our efforts and studies, and are not meant to imply endorsement by any other party.

It has been our pleasure to work with Dr. Hakanson, and his personal assistance and cooperation have been most beneficial to the study. The special effort of the individual members of the Master Plan Steering Committee is most appreciated, and we believe their continued efforts will produce great benefits for Clackamas in the future.

We believe that the directions being shown by the college, particularly in regard to participatory planning, will produce many rewards, including more involvement from the community, while setting a precedent for other community colleges to emulate. The opportunity for our involvement in this exciting process development has been most appreciated.

Sincerely,

THOMPSON ASSOCIATES

Walter Thompson

Walter Thompson

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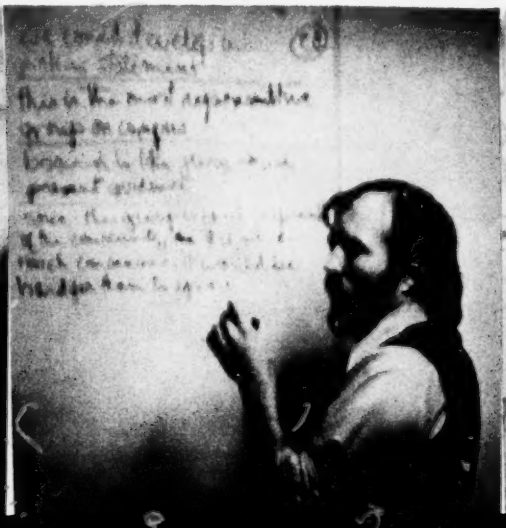
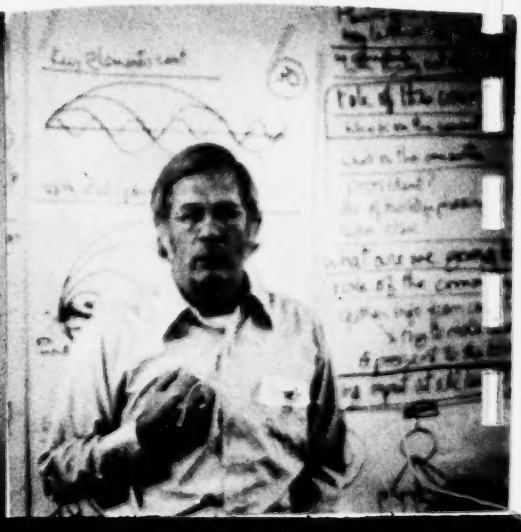




ACKNOWLEDGEMENTS

The development of the Master Planning Program for Clackamas Community College has been a team effort. The role of Thompson Associates has only been a part of the total effort which includes the consistent review and updating of the educational program and objectives, development of processes for involvement of college staff, students, and community, and numerous other activities necessary to plan a changing institution.

We are grateful for the assistance, advice and encouragement of the Board of Education, the college administrative staff, the faculty and especially the students who also gave so generously of their time to participate as active members of the planning team.

In particular, much credit is due the Master Plan Steering Committee members, and Dr. John Hakanson, who served as an ex-officio committee member and resource person. Special appreciation for their personal assistance is reserved for Ken Belieu, Marianne Berry, and Ruth Farmer.

The unique tasks presented by the program has been a challenge to our consultant team. We appreciate the opportunity of having a role in this project.

THOMPSON ASSOCIATES

+++ *The photographs shown in this report were taken at meetings of the Master Plan Steering Committee.* +++

TABLE OF CONTENTS

Letter of Transmittal	
Acknowledgements	
Summary and General Recommendations	1
Community Center Building	5
Master Planning Program	16
Existing Space Utilization	21
Enrollment Projections	39
Training	51
Long-Range Facilities Planning	53
Appendix	

SUMMARY AND GENERAL RECOMMENDATIONS

To attempt to summarize all activities, discussions, meetings and work sessions held by Thompson Associates during the past three months is a difficult task. Further details on specific areas of these efforts are shown on the following pages, and should be included as background for this summary, and general recommendations. Additional background may be obtained through review of two previous progress reports from the consultants.

In September 1972, the Clackamas Community College Board of Education authorized the employment of a consultant to do two main functions:

1. *Evaluate the current proposed solution (Community Center Building) to the college's need for a community-student center facility.*

2. *Review and study the existing long-range plan with the objectives of:*

    a. *Evaluating the established ultimate campus size or capacity on which the present long-range plan has been based.*
    b. *Review the existing educational specifications.*
    c. *Develop a revised long-range plan which includes a tentative construction schedule.*

To achieve these objectives, Thompson Associates has concentrated on development of a participatory planning process and master planning program which will continue long beyond their involvement. After development of the process, it was tested through development and prioritizing of the needs for the Community Center Building as well as reviewing the needs for the campus facilities generally. The test verified the validity of the process developed, as confirmed by simultaneously using the normal process for developing needs; i.e., determining individual user and campus needs obtained by personal interviews. All of the needs mentioned by specific people interviewed have been discussed and covered by the committee as part of its deliberations. No strong disagreement was found among the college community on the prioritizing of the needs as done by the

committee, and, in fact, much credit was given to the committee for its prioritizing efforts.

The Community Center Building is presently under redesign by the Architect-of-Record, Balsiger, Peterson & Associates, and should meet the required deadlines for submittal to the State Board of Education. The specific design and construction time schedule is shown later in this report. During discussions with the Architect and staff, emphasis has been placed on the need for the building not to exceed the construction budget of $1,050,000. Other campus needs, in terms of alterations and remodeling, should be kept in mind for use of excess monies from the funds presently available.

It should be mentioned that the master planning process is a continuous, on-going program, never completed or finished. The success of the Master Plan Steering Committee's efforts in the future will depend on several basic underlying concepts of the process. The committee must continue to obtain from, and feed back to, various members of the college community their recommendations and decisions. As a particular area of the college is being studied by the committee, whether it be a facility or a program or service, the people directly involved with that part of the college should be brought in as a resource to the committee. It is imperative that the college community feel they have means for communication with the committee.

The majority of the committee attended a special training session in meeting facilitation processes. While they may select a spokesman for various occasions, it should not be necessary for the committee to have an official chairman, or other head as such. The committee should constantly be reviewing their own process and making modifications to their program as they proceed. This will require much effort on their part and much commitment. All members of the committee have shown such commitment during the course of the study. This committee is presently being restructured to involve more community members and add representation of various other important factions of the college community.

The sections of the report which follow are each divided into three parts:

Summary *Recommendations* *Supporting Data*

Therefore, the recommendations pertaining to each item covered specifically in the report are specified within that section. However, there are several general recommendations that affect all areas of the college and should be considered here. These recommendations are:

1. *Clackamas Community College has a good history of using existing community facilities off campus. This use should continue and, in fact, be expanded to encourage other education and governmental units to meet and discuss general needs for coordination, but also consider the need to construct joint-use facilities. In particular, some type of large auditorium and conference facilities are needed by the community of Clackamas County. The college would seem to be a natural leader for development of such a facility; however, this facility should not be located on the Oregon City campus, but should be closer to the population center of the county.*

2. *A "Trees for Clackamas" project should be undertaken as a community project. The goal of this project would be to have trees donated by individuals, community organizations, industries, and other groups for planting on the Clackamas campus. This would save considerable expense in terms of tax dollars, while providing an essential aesthetic need on the campus and also serving to have more elements of the community involved with the college. The trees should be of various types and sizes as specified by the college, and available in all price ranges. The prices would include tagging showing the donor's name, and installation for large specimens; students may plant smaller plants. Emphasis should be placed on several large trees for the main areas of the campus, while allowing room for smaller specimens in planters or other areas of the campus.*

3. *A need for informational signs on the campus is very apparent. A program of signing should be developed and implemented as soon as possible. To assure conformance with the buildings and facility plans, it is recommended that the signing be designed by the architect, while the construction may be done by students or college staff.*

4. *A revie of the management information computer system in terms of needed reports should be made. The study should be conducted to determine the information needed by the college management, the frequency of the reports, and the cost of preparing such reports by computer. Much of the data supplied for this study was provided through the use of the computer system, particularly in the enrollment data and registration figures supplied.*

5. *As an aid to understanding the planning process, Board of Education members should become familiar with the process developed. This may be done through a special training session, attendance at meetings where it is being used, or through use of the college television and video-tape system. Use of the college video-taping system would allow Board members, as well as other members of the college community, to become aware of the planning process at their individual best time.*

6. *A clear understanding between the college and Architect should be made as to the Architect/Client relationship. Guidelines for this relationship are recommended further in the report under the Community Center Building section.*

7. *Based upon enrollment projections, current trends in education towards off-campus programs, and the increased rate of technological innovation, it is recommended the ultimate campus size be planned for 5,000 FTE annually. This assumes a maximum of 9,800 persons enrolled at any given term, although not necessarily on the Clackamas campus.*

COMMUNITY CENTER BUILDING

This report includes a summary of the history of this project, the work performed by Thompson Associates to reduce the program requirements, determine present needs, and review the design concepts, together with a brief narrative regarding the new educational specifications. For more detailed information, a separate publication "Educational Specifications - Clackamas Community College Community Center Building - 1973" prepared by Thompson Associates, should be obtained from the college.

SUMMARY

The history of this project is well known to the Board and the administration, but the retelling of some portions may highlight some of the problems relating to the future solutions.

The schedule was approximately as follows:

1. *Schematics started in February 1971.*
2. *Working drawings started in November 1971.*
3. *Educational specifications completed (dated) January 14, 1972.*
4. *Plans revised to delete basement on May 10, 1972 with construction estimate of $1,235,000.*
5. *Actual bid date August 1972. Low bid of $1,595,000 received.*

Seven contractors took out prints, but only three contractors submitted bids. During the summer period of 1972, there was a rapid change and large inflationary increase in construction cost.

The low bid price submitted ($1,595,000) was $282,000 over the budget figures ($1,313,000). The architects attributed this to two major items:

1. *Plumbing mechanical costs were much higher than previous*

costs on other buildings on campus, accounting for 50% of the overrun.

2. *The rapid inflationary spiral accounted for the other 50% overrun.*

The prior plan had four major activity space allotments in assignable square feet as follows:

1.	*Dining*	*9,450 sq.ft.*
2.	*Student Activities*	*9,200*
3.	*Educational*	*11,500*
4.	*Miscellaneous (bank, bookstore, etc.)*	*4,950*
	Total	*35,100 sq.ft.*
5.	*Graphic Arts (previously deleted)*	*3,600*
	TOTAL ASSIGNABLE (Ed Specs)	*38,700 sq.ft.*
	TOTAL GROSS	*56,000 sq.ft.*

Current funds available for the project now total $1,313,000, including a $195,000 appropriation due from the State of Oregon Department of Education. The revised budget, as recommended by Thompson Associates and approved by the Board, is as follows:

$1,050,000	*Construction*
55,000	*Architects Fees*
120,000	*Furnishings & Equipment*
26,000	*Inspection & Fees*
$1,251,000	*TOTAL*

This leaves $62,000 for alterations and remodeling other parts of the campus. This amount should not be considered a contingency for the Community Center Building. Further comments on use of this money are made under "Recommendations."

The continued use of Type 1 construction for fire purposes (similar to existing concrete and brick) is reasonable in view of the changing and sometimes conflicting occupancy uses. The aesthetics

of matching the existing buildings is also considered desirable at this time -- particularly to start closing in the center of the campus for a unified appearance.

After the following recommendations, a brief narrative generally describing the building, its proposed effect on people, the activities to be conducted, and the square footage are described. The complete Educational Specification should be reviewed for more information.

RECOMMENDATIONS

1. *The college should designate one person to be responsible for liaison activities with the Architect, contractor, and users of the proposed building. All communications, whether written or verbal, should be conducted through this person, except for presentations to special groups such as the full Board of Education. This person should be authorized to make necessary timely decisions regarding the building to enable the time schedule to be met. However, this person should also report on decisions made to other interested parties as soon as possible.*

2. *The Architect should specify the person responsible for the project in his office, and all contacts from the college should be made through that person.*

3. *The Master Plan Steering Committee should be involved in reviewing the design progress periodically, to complete the process developed.*

4. *Excess funds from the project should be used for alterations and other campus needs. Among these needs are:*

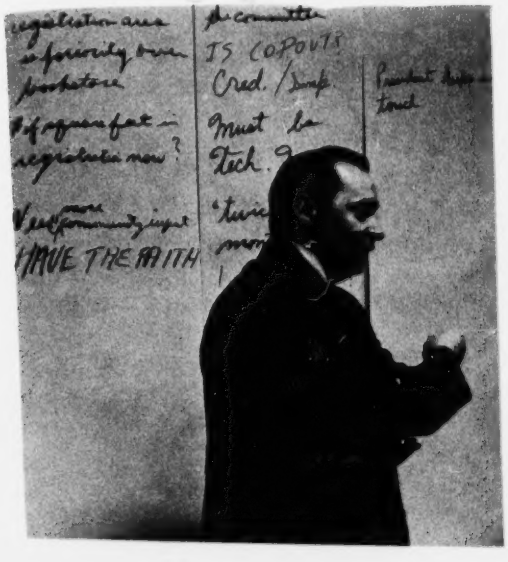
    Relocation of Trailers
    Campus Signing Program
    Landscaping
    Remodeling Clairmont Building
    Remodeling Bookstore Space
    Installation of Central Temperature System
    Interior Design Consultant Fees

5. *If requested by the Architect, special design consultants should be authorized as needed, within the budgeting limits for fees. However, all consultants, other than structural, mechanical, or electrical, should be approved by the college before retention.*

6. *The use of an interior design consultant for this building, due to its special needs, should be considered strongly. The requirements for a relaxing, yet exciting, "place" calls for special expertise in creating interior designs. Fees for this service should offset partially costs of the Architect, with some possible increase.*

7. *Special meetings between the Architect, the college liaison representative, and individual faculty and administrative users of the new building should be held during the design phase. While care must be taken to separate wants from needs, creation of space in a practical, functional manner necessitates many discussions of this type.*

8. *If approved by college legal counsel, the construction contract should include a bonus/penalty clause to attract contractors experienced in meeting tight deadlines, and providing incentives for prompt completion of construction.*



CLACKAMAS COMMUNITY COLLEGE COMMUNITY CENTER BUILDING

EDUCATIONAL SPECIFICATIONS STATEMENT

The College Community Center is to be the heart and soul of the long range development plan. This means that, if it is to be the social and physical center of the campus, it must be carefully sited in relation to the existing structures and yet retain a flexibility for the future facilities. (See suggested location plan).

It must have an ease of access for all elements of the college community as well as a relationship to utilities and service roads. It must have an aesthetic relationship to vistas, masses, scale, texture, light and all other elements of design.

It is a most important structure as this will be "the place," both in external relationships and internal spaces.

As a sense of place for the faculty and staff, it must establish a feeling of endeavor and achievement. It must signify goals and successes.

As a sense of place for the community at large, it must establish a feeling of pride and relationship. It must state that the college exists, for, and by, them.

It must serve in a general sense as a place for communication between individuals of the various campus groups, and between the various groups of the greater college community. It must be a vital part of the total education experience of all.

To gain these ends, it must satisfy certain criteria, as follows:

> *The structure must be carefully sited in the long range development plan to permit flexible, cohesive growth, not only of this structure but of other structures, present and future.*
>
> *It must also be sited on the basis of the present conditions to assure satisfaction of the short term needs and uncertain future. Our evaluation establishes the location to be to the area to the south of McLoughlin and west of Barlow Hall and*

the reflecting pool. The building must relate and tie to Barlow and McLoughlin Halls. The ties may be expressed as an interim system of covered walks, walls, or landscaped passages which would define and encompass the sunken campus square to the front of Barlow Hall. The exact type, manner and extent is a design consideration, but wood fences with a pergola effect would add warmth and scale when landscaped. The relationship of this building to the other buildings should consider axis, mass, wind, exposure, views, and sight lines.

Ease of access, positive identification, and separation of activities by groups, times and functions are basic criteria. Pedestrian access to the structure from all of the central campus buildings must be simple, direct and inviting. The public vehicular, or carriage entrance, must be easily identified and accessible with a feeling of importance. Service access for the functions required must again be simple, direct and not conflicting with the users, whether pedestrian or vehicular access.

PROGRAM:

The means of achieving the goals outlined above is the architectural program. This program consists of needs defined by general criteria and specific areas.

The programming effort has established a series of general functional needs not presently satisfied in the existing buildings in a coherent and successful manner. They include:

1. *A food service as there is a clear need for a dining area to accommodate the various user groups when on campus. Experience in other colleges and evaluation of the college needs indicate seating for approximately 280 people, served from a small, broiler, quick order type kitchen with perhaps daily delivery to reduce storage requirements would be sufficient.*

2. *A community area consisting of a meeting room and office available to all segments of the greater community for meeting on an unassigned basis.*

3. *A campus activities area which is available for the campus community to meet and relax, including a meeting room and lounge.*

4. *A student activities area consisting of recreation and related needs operated by and for students including student publications, student government, and student clubs.*

5. *Student services which are those activities established to offer assistance to students in various field by administrative and other professional personnel including counseling, placement and veterans assistance.*

6. *Academic consisting of additional teaching stations which will offer more generalized classroom space.*

The effective and successful building design must correlate and establish logical and functional relationships for the various groups and individuals using the facilities at differing times and in various sized groups. The students will require access to all the above areas at all times. The faculty and staff will primarily need the food service, campus activities, and academic areas. The greater community will use the food service, community area, campus activities and academic areas.

AREAS

A listing of the activities by general spaces with an estimate of square footage standards is as follows:

Activities	*Space Area*	*No. Spaces*	*Space Total*	*Activity Total*
1. Food Service				
Dining	*4200*	*1*	*4200*	*-*
Food Prep	*2000*	*1*	*2000*	*6200*
2. Community Area				
Meeting Room	*700*	*1*	*700*	
Office	*120*	*1*	*120*	*820*
3. Campus Activities				
Lounge	*2000*	*1*	*2000*	
Mall	*1000*	*1*	*1000*	
Recreation				
Noisy	*1000*	*1*	*1000*	
Quiet	*400*	*1*	*400*	
Information kiosk	*80*	*1*	*80*	*4480*
4. Student Activities				
Student Advisor	*120*	*1*	*120*	
Government & Clubs				
Offices	*120*	*3*	*360*	
Office/Workroom	*300*	*1*	*300*	
Meeting Room	*500*	*1*	*500*	*1280*
5. Student Services				
Counseling Office	*225*	*1*	*225*	
Offices	*100*	*5*	*500*	
Offices	*120*	*1*	*120*	
Meeting Room	*140*	*1*	*140*	
Testing	*400*	*1*	*400*	
Registrar				
Office	*150*	*1*	*150*	
Vault	*680*	*1*	*680*	
Admissions	*1200*	*1*	*1200*	
Cashier	*150*	*1*	*150*	
Student Personnel				
Financial Aids	*120*	*1*	*120*	
Veterans	*120*	*1*	*120*	

Activities	Space Area	No. Spaces	Space Total	Activity Total
Student Personnel (con't)				
Placement	*120*	*1*	*120*	
Interview	*100*	*2*	*200*	
Sec/Records (4)	*915*	*1*	*915*	*5040*
6. Academic				
Lecture	*1800*	*1*	*1800*	
General	*250*	*2*	*500*	*2300*
Total Assignable Space				*20,120*
Total Gross Space (70% Efficiency)				*28,740*

The efficiency factor of 70% is an overall estimate based upon the uses shown above. The allowance of 30% would cover elevators, washrooms, corridors, and other general spaces. The design effort should attempt to increase this efficiency factor.

ARCHITECT/CLIENT RELATIONSHIP

The following generally attempts to describe an Architect/Client relationship and responsibilities. For further elaboration, the American Institute of Architects Handbook of Professional Practice should be consulted.

ARCHITECTS STATUS AND RESPONSIBILITIES

An architect is primarily the client's professional advisor. An Architect so acts in advising how best the client's problem may be solved, in consistently reporting the probable cost of the work, in selecting methods and materials of construction, and in numerous other ways. As the reading of the drawings and specifications is almost always a strange process for a layman, the Architect should use every effort to ensure the understanding of the documents.

In dealing with other persons on behalf of the client, an Architect, the courts hold, is the Client's agent.

To assure good understanding of the client's desires, financial requirements, and special needs, the Architect should discuss periodically with the client represnetative the present status of the project, the design concepts being followed, latest cost estimates, and possible changes required in program, budget, or schedule. Any deviation from agreed upon plans should be reported to the client immediately.

When a construction contract has been executed between the client and a contractor by the terms of which the Architect becomes the official interpreter of its conditions and the judge of its performance, the Architect is thereby given a new status, in addition to that of professional advisor, to that of an agent of the client. In actions under this new status, it is incumbent on the Architect to side neither with the client nor with the contractor, but to use the powers under the contract to enforce its faithful performance by both parties.

It will be perceived that in acting under the standard general conditions of the contract, an Architect renders most of his decisions as an arbitrator. In such circumstances, he is obligated to act with the greatest care, fairness and deliberation.

CLIENT'S RESPONSIBILITIES

The client is responsible to the Architect for supplying clear concepts of the facilities needed, their function, special needs, and budgeting requirements. If the requirements are not compatible, upon advice of the Architect, a review of the needs, budget, and schedule should be undertaken at once. All changes in terms of progress, schedule, or budget should be reported to the Architect at once.

A representative of the client should be designated responsible for all liaison with the Architect. All communications with the Architect should proceed through this representative.

The client should give prompt and thorough consideration to all sketches, drawings, specifications, proposals, contracts and other documents prepared by the Architect. Inattention to such matters may result in failure to understand the work contracted for, and perhaps in disappointment and expense, when the work is in course of execution. Prompt decisions will be required if the project is to progress expeditiously.

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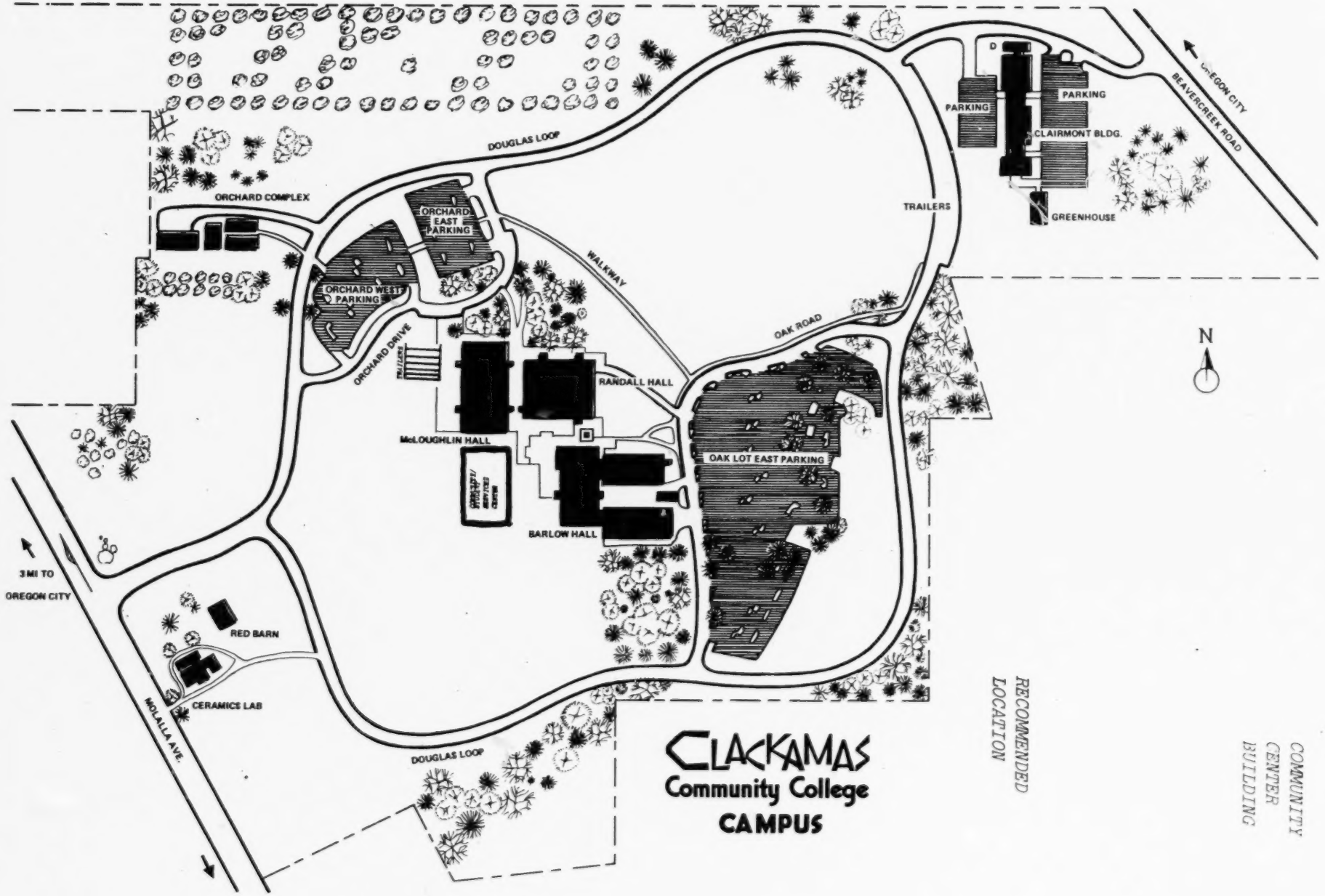
DOUGLAS LOOP
ORCHARD COMPLEX
ORCHARD EAST PARKING
ORCHARD WEST PARKING
ORCHARD DRIVE
WALKWAY
OAK ROAD
TRAILERS
D
PARKING
PARKING
CLAIRMONT BLDG.
GREENHOUSE
BEAVERCREEK ROAD
TO OREGON CITY
RANDALL HALL
McLOUGHLIN HALL
BARLOW HALL
OAK LOT EAST PARKING
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3MI TO
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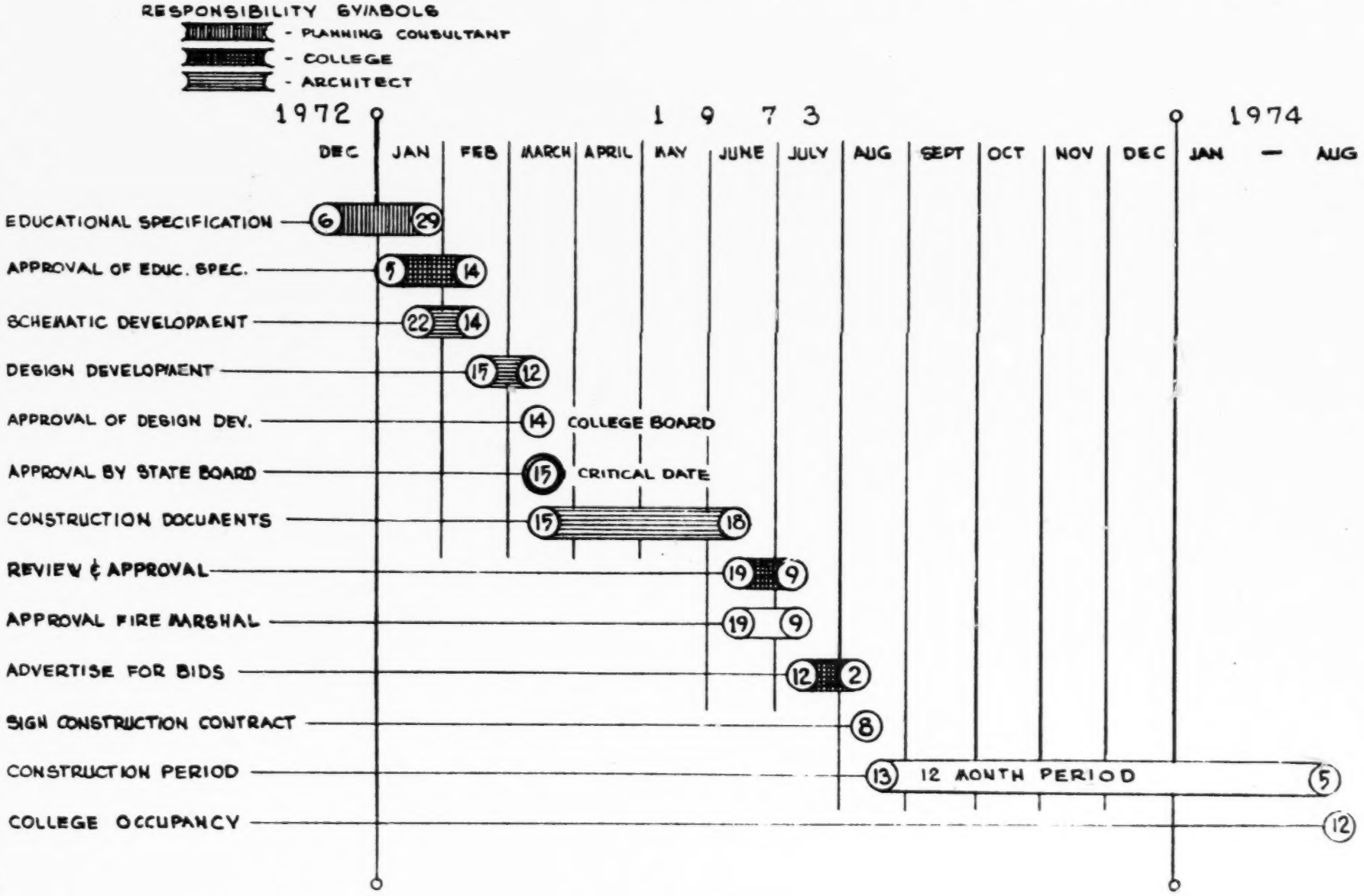
RED BARN
CERAMICS LAB
MOLALLA AVE.
DOUGLAS LOOP
CLACKAMAS
Community College
CAMPUS
RECOMMENDED
LOCATION
COMMUNITY
CENTER
BUILDING

EVENT SCHEDULE ~ COMMUNITY CENTER BUILDING (REVISED PROGRAM)

CLACKAMAS COMMUNITY COLLEGE — JAN 10 1973 — BALSIGER PETERGEN & ASSOC. AIA



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MASTER
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PROGRAM

MASTER PLAN STEERING COMMITTEE

Students	*Dick Mabee*
	Ron Wade
	Robin Richmond
Faculty	*Carol Petersen*
	Jim Painter
	Vince Fitzgerald
Classified Employees	*Dave Finstermacher*
	Paul Roeder
	Mary Stuart
Community Representatives	*R. C. Smelser*
	Al Shaver
Administration	*Alf Lair*
	Lyle Reese
	Bob Ellis

MASTER PLANNING PROGRAM

In attempting to describe the participatory planning process developed by the Master Plan Steering Committee with assistance by the consultants, the temptation is to share all the details of the process development with those not directly involved. For those desiring such information, a complete set of explicit group memory notes are kept by the college administration and are available for review. In addition, Thompson Associates' two previous monthly reports should be reviewed.

The following attempts to summarize the process developed, the actions taken, the results of those actions, and the future plans of the committee.

SUMMARY

The planning process development has involved high levels of excitement, frustration, personal confrontations, challenges to existing ideas, expressions of personal expectations from the meeting and from the college, much agreement and disagreement, much criticism, much praise, but most important of all, much respect for the ideas and opinions of each individual member of the Committee. All members have participated freely and openly in all discussions.

While there are other people who could equally as well represent the various factions of the college community, it was agreed very early that the present members of the Committee were the best representatives for this planning process. However, it was also agreed that some changing of committee members due to time commitments was inevitable and should be planned for. At the present time, the committee is being restructured to include an additional community representative and a technical/mechanical department representative.

To determine if a proposed solution to planning problems is successful, the following criteria for good solutions was developed by the committee:

1. *It will meet state guidelines.*
2. *It should represent needs and feelings of constituents.*
3. *It should be flexible in what is done and keeping the results flexible in the building program.*
4. *The results should look like what people said they wanted (input should come out the way it went in).*
5. *It should meet a pre-established time line.*

6. *Who should be involved: Cross section of the school and community.*
   a. *Classified.*
   b. *Administration.*
   c. *Students.*
   d. *Faculty.*
   e. *Public:*
      (1) *Cross section of people - age - socio-economic - geographical.*
      (2) *Cross section of skills.*
7. *Clear channels of communication -- bringing information in and sending information out.*
8. *It will have early and continuing involvement.*
9. *Whenever possible, it should make use of existing procedures.*
10. *It should have a variety of involvement mechanisms (methods).*
11. *It should provide for continued planning.*
12. *The planning process should have well-defined boundaries, guidelines, and make limits clear.*
13. *The solution should meet an agreed-upon definition of a master plan.*
14. *All members should have equal status in the Planning Steering Committee.*
15. *It should draw upon the users for input.*
16. *The process should be visible and open.*
17. *It should have qualified accountability tests to see if it is true.*
18. *It should have a follow-up and evaluation mechanism.*
19. *The process should produce a committee for change.*
20. *It will have leadership to keep the process non-biased.*

This criteria is now under review for changes by the Steering Committee, in light of the experience gained in planning the Community Center building.

A matrix for future planning has been developed and is being used in the committee planning. The various phases of the planning process developed are:

1. *Define the needs - What is needed; and for whom?*
2. *Prioritize needs - Decide which needs are more important.*
3. *Translate needs into goals/objectives - Make needs operational - What ought to happen?*
4. *Develop strategies for achievement of objectives - Needs to meet the goals and objectives.*
5. *Allocate resources for implementing strategies - Financing, staffing, facilities, human.*

6. *Decision making - Approval by the existing decision-making structure.*
7. *Implementation - Activate the decision - Do it.*
8. *Evaluation-testing.*
9. *Revision-recycling.*

The matrix developed is shown in the Appendix of this report.

The process was tested on development and prioritizing of needs for the Community Center building. The results have proved the process, both in terms of the success criteria developed by the committee, and by the following:

1. *The needs developed by the committee have been accepted by the Board of Trustees, the college staff and students. These needs were verified by personal interviews with students, proposed users of the building, administrators and faculty, and classified employees.*
2. *The needs are still consistent with the long-range plans for the campus.*
3. *It has involved other persons on campus as necessary.*
4. *It has met the budgetary and time constrictions.*

A review of the criteria for a successful process was made by the committee in early January. While the criteria was accepted as still valid, it should be constantly reviewed for validity by the committee.

The committee is now working on the Master Plan Program to continue updating the Long Range Plan.

RECOMMENDATIONS

1. *The committee be officially recognized as a permanent committee by the Board of Education and be charged with development of a Master Planning Program, involving the participatory planning concepts developed.*

2. *The Board members become familiar with the participatory planning concepts developed and participate in the process, as much as possible.*

3. *In the event of restructuring the committee, as is bound to happen, new members added at one time should not exceed three persons. The training involved in the process requires some time to learn and understand. New members should read past*

copies of the explicit group memory reports, as well as discussing the process with experienced members of the committee.

4. *The committee be considered a review committee in terms of the Community Center building design. Since their work and input has been the backbone of the educational specifications, they should be regularly appraised of the design status, and their comments solicited. Due to time and budgetary constraints, their comments will need to be reviewed by the college administration before final direction is given to the architect.*

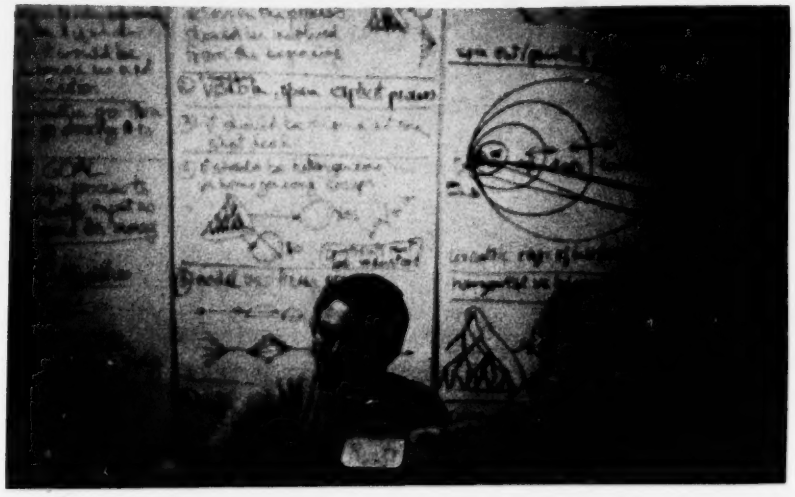
5. *A regular meeting time, schedule and location be established for committee meetings. This schedule should be posted and publicized throughout the campus and community, and drop-ins encouraged.*

6. *Training of other college staff members, especially faculty and administrators, should be conducted periodically by members of the committee, or consultants, if desired. However, several of the committee members have shown capability in understanding and facilitating the process, and passing their knowledge on to others in the college community should be encouraged.*

7. *The Declaration of Participatory Planning Principles shown on the next page be adopted as the guidelines to be used by the committee in their future work.*

DECLARATION OF PARTICIPATORY PLANNING PRINCIPLES

1. *All the ultimate actors in the process should be involved from the beginning.*
2. *It should be a visible, open, explicit process.*
3. *It should be on-going, not a one-shot deal.*
4. *It should be heterogeneous versus homogeneous.*
5. *It should be an interacting process versus a linear process.*
6. *It should be action versus research oriented.*
7. *It should have success points with spin-outs at various times.*
8. *It should connect to the existing decision-making structure.*
9. *It will involve concentric rings of involvement with the various members of the college community.*
10. *It will have clear channels of communications.*
11. *It will develop win/win solutions as against win/lose solutions.*
12. *It will have clear parameters.*
13. *The process should be an educational and learning process for participants.*



EXISTING SPACE UTILIZATION

The following is a report on the space utilization of the existing facilities at Clackamas. The figures shown in the tables are taken from the fall 1972 master schedule dated October 17, 1972. This report was used to determine the station utilization comparison with State standards. The winter master schedule dated January 4, 1973 was used for the comparative table. Figures were not used from the report that fell under the following conditions:

1. *The times used for the study were 8 o'clock a.m. to 5 o'clock p.m. Monday through Friday. Classes held other than during this period were not considered.*
2. *The seats available figures shown were not evaluated in terms of space. It is our understanding they were developed on the basis of instructional demands, not facility capability.*
3. *Classes where PLACE, TIME, or DAYS are shown "TBA" were not used.*
4. *Classes held off-campus were not considered in the analysis.*
5. *The physical education classes held in Randall Hall gymnasium were not evaluated since many run concurrently or outdoors.*
6. *Where the seats taken shown was zero, the classes were not counted.*

SUMMARY

The conclusions of our studies taken from the tables showed generally a use equal to or greater than the State standards in terms of student stations. The State standards used for comparison were:

	Weekly Room Hours	*Percentage Station Occupancy*	*Station Utilization*
Classrooms	*33*	*60*	*19.8*
Laboratories	*20*	*80*	*16.0*

RECOMMENDATIONS

The following recommendations are made based upon these studies, and after discussions with administrators and faculty:

1. *Room 155 in Barlow Hall, consisting of 4,615 sq. ft., is presently used as a machine shop. While enrollment figures for the winter quarter have increased over fall quarter, the investment of space and equipment for the total enrolled should be evaluated. In particular, consideration should be given to possibly allowing the space to be used for a planned diesel repair program. The facility is very adequate to handle that type of program.*

2. *Upon completion of the Community Center Building, or sooner if required, the bookstore should be moved to Barlow Hall in Rooms 251 and 252. Ideally, it should wait until completion of the Community Center Building when the Barlow student lounge is not needed. This would allow the bookstore operation to have 2723 sq. ft. available, plus storage in 201 Part Boiler Room. This facility is easily accessible by the elevator and would allow further expansion in the future. The elimination of Room 252 as a classroom would increase utilization of the adjoining rooms, while not overloading the facility.*

3. *Upon removal of the bookstore, Rooms 100, 101 and 102 in McLaughlin Hall would then become available for general classroom use, and specifically available for use by the nursing program. This program would also then have easy access to the television studio, where innovative instructional techniques might be developed. When nursing classes were not being held on campus, this space would then be available for seminars, work shops, or other special instructional uses.*

4. *Clairmont Building should be developed as an Art Center, among its other functions. By removing the nursing program, Rooms 129, 131 and 133 in Clairmont could be turned into art uses. This would allow the art program to be near the graphic arts program, with room for expansion when the Intermediate Education District lease expires in approximately one year. In addition, they would have access to other large classrooms presently not fully utilized by the environmental programs. Outdoor ceramics or sculpture areas could be treated in one of the two outdoor parking lots at Clairmont to eliminate the problems that would occur if these functions were held indoors. A shed roof carefully designed could provide adequate protection even in inclement weather and infrared heaters could give some heat. By utilizing outdoor areas, some of the major ventilation*

problems that arise with ceramics and sculpture can be avoided.

5. *The use of Smuckers Building as an instructional building should be ceased. In comparison with the other facilities on campus, Smuckers does not meet building codes requirements for Type 1 construction, which should be required for school buildings. In addition, allocation of the financial resources available to the college should be placed in the newer buildings. Use of the funds necessary to improve Smuckers spent in the Clairmont Building would produce much greater benefits long-range. In any event, regardless of the expenditures, the Smuckers Building could never be brought up to correct safety standards in codes for schools. The building, however, may be used for warehousing or other non-instructional uses. (See Architect's letter in Appendix.)*

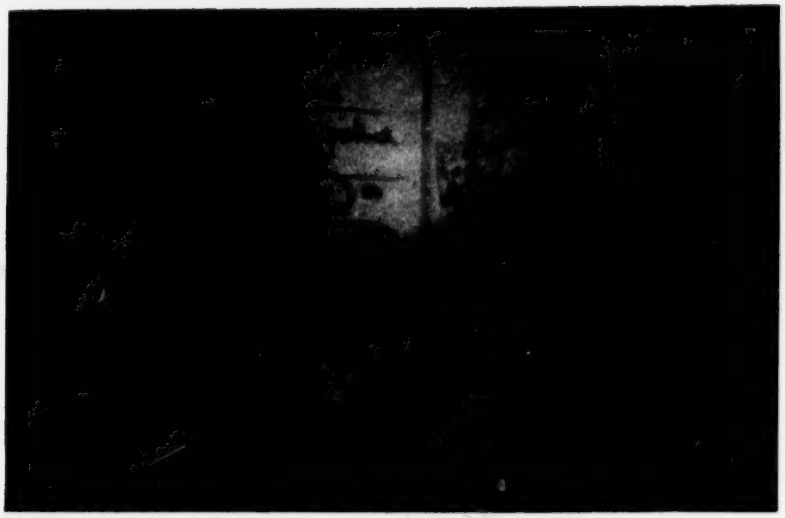
6. *The trailers should be relocated to the northwest corner of McLaughlin Hall, where Master Plan calls for an Administration building. It is anticipated the prime use of the trailers will be for academic instructional use or faculty offices. When moving the trailers to this area, a landscaped redwood fence should be constructed to surround the trailers and shield their appearance. This can be done very well by using redwood fencing, together with planted trellises, at minimal cost. The main cost for moving the trailers, creating necessary utility connections, and developing landscaping, should not exceed $15,000.*

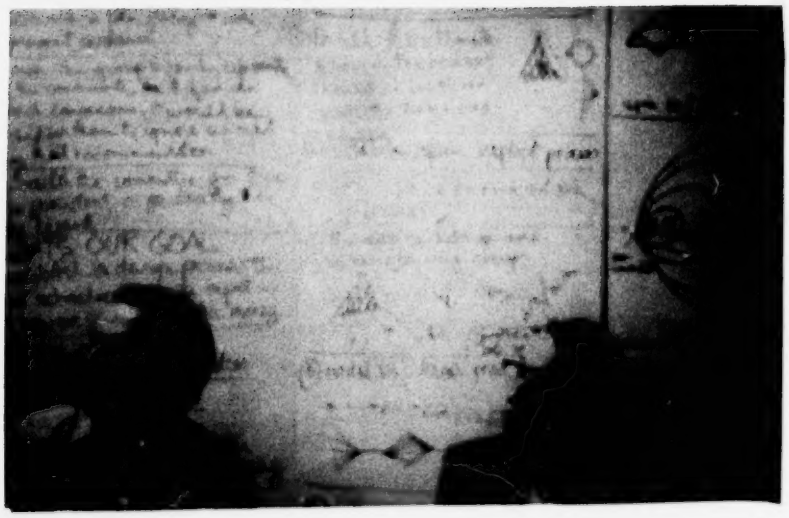
7. *Upon completion of the Community Center Building, and relocation of the registrar's office, the existing space utilized by that facility should be made available to the Community Education Department. This would bring together all community education people in one area and facilitate better communication.*

8. *Upon relocation of the Counseling Staff, the existing space of 1544 sq. ft. should be subdivided into two classrooms for general use. Additional faculty offices will be available in the trailer complex.*

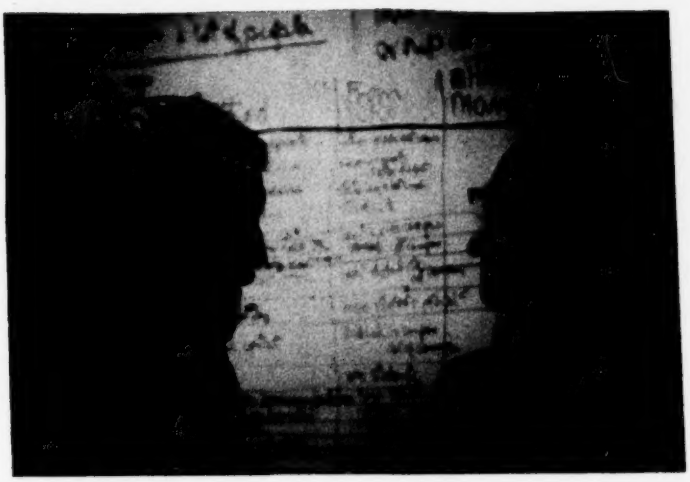
9. *A computerized Master Schedule report for use by the facilities planner should be developed using the same figures presently available from the Registrar's Master Schedule. This would merely require a reprogramming of the report,*

changing "SEATS" available figures to reflect capacities of each room, and calculation of a space utilization percentage. This report should be produced at the close of registration each quarter. Trends in the use of the rooms would become very apparent through the use of such a report.





The following tables reflect the student station utilization of each room shown, for the Fall quarter of the 1972-73 school year, based upon the Master Schedule dated October 17, 1972.



EXISTING
SPACE
UTILIZATION

	A	B	C	D	E	F	G	H
Bldg. & Rm.#	No. Stations	Scheduled Rm. Hours	Available Stations Hours	Actual Station Hours	Actual/ Available	% Occupancy	Factor	State Factor
Barlow Hall			A x B = C		D/C = E		B x F	
Lecture								
State Standard		33				60	19.8	
B 103	15	15	225	129	129/225	57	8.6	19.8
B 105	35	30	1050	562	562/1050	54	16.2	19.8
B 151	20	37	740	644	644/740	87	32.2	19.8
B 163	25	26	750	351	351/650	54	14.0	19.8
B 203	40	24	960	504	504/960	53	12.7	19.8
B 252	30	16	480	538	538/480	112	17.9	19.8
B 253	75	21	1575	855	855/1575	54	11.3	19.8
B 254A	35	26	910	436	436/910	48	12.5	19.8
Lab								
State Standard		20				80	16.0	
B 102	26	6	156	57	57/156	37	2.2	16.0
B 152	24	28	672	402	402/672	60	16.8	16.0
B 153	24	13	312	222	222/312	71	9.2	16.0
B 154	30	11	330	150	150/330	45	5.0	16.0
B 155	15	5	75	115	115/75	153	7.7	16.0
B 157	15	31	465	429	429/465	92	28.5	16.0
B 161	40	36	1440	825	825/1440	57	16.2	16.0
B 166	15	20	300	280	280/300	93	18.6	16.0
B 254B	22	39	858	435	435/858	51	19.9	16.0
B 255	26	34	884	634	634/884	71	24.1	16.0

	A	B	C	D	E	F	G	H
Bldg. & Rm. #	No. Stations	Scheduled Rm. Hours	Available Station Hours	Actual Station Hours	Actual/ Available	% Occupancy	Factor	State Factor
Randall Hall			A x B = C		D/C = E	E = F	B x F	
State Standard		33				60	19.8	
R 11	25	30	750	651	651/750	87	26.0	19.8
R 12	25	27	675	702	702/675	104	28.1	19.8
R 201	30	17	510	353	353/510	69	11.7	19.8
R 219	20	14	280	155	155/280	55	7.7	19.8
R 220	25	27	675	579	579/675	86	23.2	19.8
R 221	30	27	810	627	627/820	77	20.8	19.8
R 222	30	30	900	624	624/900	69	20.7	19.8
Lab								
State Standard		20				80	16.0	
R 208	40	16	640	317	317/640	50	8.0	16.0

EXISTING
SPACE
UTILIZATION

	A	B	C	D	E	F	G	H
Bldg. & Rm. #	No. Stations	Scheduled Rm. Hours	Available Station Hours	Actual Station Hours	Actual/ Available	% Occupancy	Factor	State Factor
McLoughlin Hall			A x B = C		D/C = E	E = F	B x F	
Lecture								
State Standard		33				60	19.8	
M 112	20	24	480	434	434/480	90	21.6	19.8
M 119	150	7	1050	489	489/1050	47	3.3	19.8
M 132	15	28	420	591	591/420	141	40.0	19.8
M 133	30	17	510	368	368/510	72	12.2	19.8
M 134	25	16	400	332	332/400	83	13.3	19.8
M 135	13	21	273	293	293/273	100	21.0	19.8
M 221	25	22	550	515	515/550	94	20.7	19.8
M 256	15	22	330	548	548/330	166	36.5	19.8
Lab								
State Standard		20				80	16.0	
M 100	30	14	420	361	361/420	86	12.0	16.0
M 110	20	13	260	208	208/260	80	10.4	16.0
M 119	25	9	225	57	57/225	29	2.6	16.0
M 217	25	27	675	261	261/675	39	10.5	16.0

	A	B	C	D	E	F	G	H
Bldg. & Rm.#	No. Stations	Scheduled Rm. Hours	Available Stations Hours	Actual Station Hours	Actual/ Available	% Occupancy	Factor	State Factor
Clairmont Hall			A x B = C		D/C = E		B x F	
Lecture								
State Standard		33				60	19.8	
C 12	20	3	60	27	27/60	45	1.4	19.8
C 13	30	6	180	12	12/180	6	0.4	19.8
C 14	25	5	125	50	50/125	40	8.0	19.8
C 129	25	12	300	213	213/300	71	8.5	19.8
C 133	30	8	240	68	68/240	28	2.2	19.8
C 135	25	20	500	324	324/500	65	13.0	19.8
Lab								
State Standard		20				80	16.0	
C 151	25	4	100	80	80/100	80	3.2	16.0
C 152	25	15	375	159	159/375	42	6.3	16.0
C 153	25	9	225	134	134/225	59	5.3	16.0
C 101	20	6	120	96	96/120	80	4.8	16.0

EXISTING
SPACE
UTILIZATION

	A	B	C	D	E	F	G	H
Bldg. & Rm.#	No. Stations	Scheduled Rm. Hours	Available Stations Hours	Actual Station Hours	Actual/ Available	% Occupancy	Factor	State Factor
Trailers			A x B = C		D/C = E		B x F	
Lecture								
State Standard		33				60	19.8	
E 1	40	22	880	353	353/880	40	8.8	19.8
F 1	25	24	600	568	568/600	95	22.8	19.8
F 2	22	25	550	406	406/550	73	18.3	19.8
F 3	25	24	600	489	489/600	82	19.7	19.8
Lab								
State Standard		20				80	16.0	
D 1	30	30	900	600	600/900	66	19.8	16.0

	A	B	C	D	E	F	G	H
Bldg. & Rm. #	No. Stations	Scheduled Rm. Hours	Available Station Hours	Actual Station Hours	Actual/ Available	% Occupancy	Factor	State Factor
Orchard Center			A x B = C		D/C = E	E = F		
Lecture								
State Standard		33				60	19.8	
OC 102			Audio-Tutorial-Chem.					
OC 105	26	17	442	362	362/442	82	13.9	19.8
OC 106			Audio-Tutorial					19.8
OC 108	24	12	288	168	168/288	58	6.7	19.8
OC 120	26	8	208	227	227/208	109	8.7	19.8
OC 121	26	7	182	152	152/182	84	5.9	19.8
OC 146	15	16	240	189	189/240	78	12.5	19.8
Lab								
State Standard		20				80	16.0	
OC 101	24	18	432	276	276/432	64	11.5	16.0
OC 148	24	13	312	136	136/312	45	5.9	
OC 149	24	10	240	52	52/240	22	2.2	
OC 150	20	11	220	121	121/220	55	6.1	

The following tables compare room utilization between the Fall and Winter quarters, based upon the Master Schedules for each quarter.

BARLOW HALL
LAB ROOMS

Type	Building	Room	Day	Fall (10-17-72) Actual Hrs. Used	Winter (1-4-73) Actual Hrs. Used	Difference	
Lab	B	102	M	2	3	+1	
			T	1	2	+1	
			W	1	3	+2	
			T	1	2	+1	
			F	1	3	+2	(+7)
	B	109	M		3	+3	
			T		3	+3	
			W		3	+3	
			T		3	+3	
			F		3	+3	(+15)
	B	152	M	6.5	6.5		
			T	4	4		
			W	6.5	6.5		
			T	7	4	-3	
			F	4	6.5	+2.5	(-.5)
	B	153	M	3	1	-2	
			T	4	2.5	-1.5	
			W	3	1	-2	
			T	2	1.5	- .5	
			F	1	1		(-6)
	B	154	M	2	2		
			T	2	3	+1	
			W	2	2		
			T	2	3	+1	
			F	3	2	-1	(-1)
	B	155	M	1	5	+4	
			T	1	5	+4	
			W	1	5	+4	
			T	1	5	+4	
			F	1	5	+4	(+20)
	B	157	M	5	8.5	+3.5	
			T	7	6	-1	
			W	5	8.5	+3.5	
			T	7	6	-1	
			F	7	6	-1	(+4)

Type	Building	Room	Day	Fall (10-17-73) Actua Hrs. Used	Winter (1-4-73) Actual Hrs. Used	Difference	
Lab	B	161	M	6	3	-3	
			T	6	3	-3	
			W	6	3	-3	
			T	6	3	-3	
			F	6	3	-3	(-15)
	B	166	M	4	5	+1	
			T	4	5	+1	
			W	4	5	+1	
			T	4	5	+1	
			F	4	5	+1	(+5)
	B	254B	M	9		-9	
			T	8		-8	
			W	8		-8	
			T	7		-7	
			F	7		-7	(-39)
	B	255	M	9	6	-3	
			T	5	8	+3	
			W	8	7	-1	
			T	5	6	+1	
			F	7	6	-1	(-1)

BARLOW HALL
LECTURE ROOMS

Type	Building	Room	Day	Fall (10-17-72) Actual Hrs. Used	Winter (1-4-73) Actual Hrs. Used	Difference	
Lec.	B	103	M	4	5	+1	
			T	1.5	5	+3.5	
			W	4	5	+1	
			T	1.5	4.5	+3	
			F	4	4		(+8.5)
	B	105	M	6	4	-2	
			T	6.5	6	- .5	
			W	6	4	-2	
			T	6.5	6	- .5	
			F	5	3	-2	(-7)
	B	151	M	8	7	-1	
			T	7	6	-1	
			W	8	7	-1	
			T	6	5	-1	
			F	8	7	-1	(-5)
	B	163	M	6	3	-3	
			T	5.5	5.5		
			W	6	3	-3	
			T	5.5	5.5		
			F	3	3		(-6)
	B	203	M	6	6		
			T	3	3.5	+ .5	
			W	6	6		
			T	3	3.5	+ .5	
			F	6	6		(+1)
	B	252	M	4	4		
			T	2.5	4	+1.5	
			W	4	4		
			T	2.5	4	+1.5	
			F	3	3		(3)
	B	253	M	5	7	+2	
			T	3	2.5	- .5	
			W	5	7	+2	
			T	3	2.5	- .5	
			F	5	7	+2	(+5)

Type	Building	Room	Day	Fall (10-17-72) Actual Hrs. Used	Winter (1-4-73) Actual Hrs. Used	Difference	
Lec.	B	254A	M	7	7		
			T	2.5	5	+2.5	
			W	7	7		
			T	2.5	5	+2.5	
			F	7	6	-1	(+2
	B	261	M		1	+1	
			T		1	+1	
			W		1	+1	
			T		1	+1	
			F		1	+1	(+5

CLAIRMONT HALL
LECTURE & LAB ROOMS

Type	Building	Room	Day	Fall (10-17-72) Actual Hrs. Used	Winter (1-4-73) Actual Hrs. Used	Difference	
Lec.	C	12	M	1		-1	
			T				
			W	1		-1	
			T				
			F	1		-1	(-3)
	C	13	M				
			T	3	1.5	-1.5	
			W				
			T	3	1.5	-1.5	
			F				(-3)
	C	14	M				
			T	2.5		-2.5	
			W				
			T	2.5		-2.5	
			F				(-5)
	C	129	M	4	4.5	+ .5	
			T		2	+2	
			W	4	4.5	+ .5	
			T		2	+2	
			F	4	2	-2	(+3)
	C	133	M	2	2		
			T	1	1		
			W	2	2		
			T	1	1		
			F	2	1	-1	(-1)
	C	135	M	6	4	-2	
			T	1	2	+1	
			W	6	4	-2	
			T	2	2		
			F	5	4	-1	(-4)

Type	Building	Room	Day	Fall (10-17-72) Actual Hrs. Used	Winter (1-4-73) Actual Hrs. Used	Difference	
Lab	C	151	M	1	1		
			T				
			W	2	1	-1	
			T		5	+5	
			F	1	1		(+4)
	C	152	M	3	1	-2	
			T	3		-3	
			W	3	1	-2	
			T	4		-4	
			F	2	1	-1	(-12)
	C	153	M	1	1		
			T	3	3		
			W	1	1		
			T	3	3		
			F	1	1		(0)
	C	101	M	2	2		
			T				
			W	2	2		
			T				
			F	2	2		(0)

ORCHARD CENTER

LECTURE & LAB ROOMS

Type	Building	Room	Day	Fall (10-17-72) Actual Hrs. Used	Winter (1-4-73) Actual Hrs. Used	Difference	
Lec.	OC	105	M	2	2		
			T	5.5	5	- .5	
			W	2	2		
			T	4.5	5	+ .5	
			F	3	6	+3	(+3)
	OC	108	M	6	6		
			T		4	+4	
			W				
			T				
			F	6		-6	(-2)
	OC	120	M	2	3	+1	
			T	1	1.5	+ .5	
			W	3	2	-1	
			T		1.5	+1.5	
			F	2	1	-1	(+1)
	OC	146	M	4	4		
			T	2	3	+1	
			W	4	4		
			T	2	3	+1	
			F	4	4		(+2)
Lab	OC	106	M	Did not include in Fall Work	2	+2	
			T				
			W				
			T				
			F				(+2)
	OC	101	M	1		-1	
			T	6	2	-4	
			W	4	1	-3	
			T	6	2	-4	
			F	1		-1	(-13)
	OC	121	M	3	4	+1	
			T				
			W	2	2		
			T	2	1	-1	
			F				(0)

Type	Building	Room	Day	Fall (10-17-72) Actual Hrs. Used	Winter (1-4-73) Actual Hrs. Used	Difference	
?	OC	148	M	7	8	+1	
			T	2	2		
			W		1	+1	
			T				
			F	4	4		(-1)
?	OC	149	M	5	6	+1	
			T	1	2	+1	
			W				
			T				
			F	4	3	-1	(-1)
?	OC	150	M	2	3	+1	
			T	2	1	-1	
			W	2	3	+1	
			T		1	+1	
			F	5	3	-2	(0)

TRAILERS D, E, F, G
LECTURE & LAB ROOMS

Type	Trailer	Room	Day	Fall (10-17-72) Actual Hrs. Used	Winter (1-4-73) Actual Hrs. Used	Difference	
Lec.	E	1	M	6		-6	
			T				
			W	6		-6	
			T	4		-4	
			F	6		-6	(-22)
	F	1	M	5.5	6	+ .5	
			T	4.5		-4.5	
			W	5.5	6	+ .5	
			T	4.5	3	-1.5	
			F	4	6	+2	(-3)
	F	2	M	5		-5	
			T	3.5		-3.5	
			W	8		-8	
			T	3.5		-3.5	
			F	5		-5	(-25)
	F	3	M	5		-5	
			T	4.5		-4.5	
			W	5		-5	
			T	4.5		-4.5	
			F	5		-5	(-24)
	G	1	M		5	+5	
			T		5.5	+5.5	
			W		5	+5	
			T		5.5	+5.5	
			F		4	+4	(+25)
	G	2	M		6	+6	
			T		4.5	+4.5	
			W		6	+6	
			T		4.5	+4.5	
			F		4	+4	(+23)
	G	3	M		5	+5	
			T		3.5	+3.5	
			W		7	+7	
			T		1.5	+1.5	
			F		5	+5	(+22)

Type	Trailer	Room	Day	Fall (10-17-72) Actual Hrs. Used	Winter (1-4-73) Actual Hrs. Used	Difference	
Lab	D	1	M	8	6	-2	
			T	3	4	+1	
			W	8	6	-2	
			T	3	4	+1	
			F	8	6	-2	(-4)

McLOUGHLIN HALL
LECTURE & LAB ROOMS

Type	Building	Room	Day	Fall (10-17-72) Actual Hrs. Used	Winter (1-4-73) Actual Hrs. Used	Difference	
Lec.	M	112	M	6	4	-2	
			T	3.5	2.5	-1	
			W	6	4	-2	
			T	3.5	1.5	-2	
			F	5	3	-2	(-9)
	M	119	M				
			T				
	Theater		W	*Data not used*			
			T				
			F				
	M	132	M	5	7	+2	
			T	6.5	6	- .5	
			W	5	7	+2	
			T	6.5	6	- .5	
			F	5	7	+2	(+5)
	M	133	M	4	5	+1	
			T	2.5	3	+ .5	
			W	4	5	+1	
			T	2.5	3	+ .5	
			F	4	5	+1	(+4)
	M	134	M	4	5	+1	
			T	2	3	+1	
			W	4	5	+1	
			T	2	3	+1	
			F	4	5	+1	(+5)
	M	135	M	5	4	-1	
			T	3	3		
			W	5	4	-1	
			T	3	3		
			F	5	4	-1	(-3)
	M	221	M	5	5		
			T	4.5	5	+ .5	
			W	5	5		
			T	4.5	4	- .5	
			F	3	4	+1	(+1)

Type	Building	Room	Day	Fall (10-17-72) Actual Hrs. Used	Winter (1-4-73) Actual Hrs. Used	Difference	
Lec.	M	256	M	7	6	-1	
			T	2	4.5	+2.5	
			W	7	5	-2	
			T		2.5	+2.5	
			F	6	5	-1	(+1
Lab	M	100	M	4		-4	
			T	4		-4	
			W	3		-3	
			T	3		-3	
			F				(-1
	M	110	M	3	2.5	- .5	
			T	2	2.5	+ .5	
			W	3	2.5	- .5	
			T	2	2.5	+ .5	
			F	3	2.5	- .5	(-.5
	M	119	M				
			T				
	Theater		W	*Data not used*			
			T				
			F				
	M	217	M	7	5	-2	
			T	3	2.5	- .5	
			W	7	5	-2	
			T	3	2.5	- .5	
			F	7	5	-2	(-7)

ENROLLMENT PROJECTIONS

The main purpose of this study was for Thompson Associates (Ta) to examine the existing method to project enrollment used by the Clackamas Community College and develop current projections.

Our sources of data are mentioned at this time both to serve as future reference sources and to thank them for their assistance.

K - 12 data - Waneta Conway, Clackamas Intermediate Education District
Clackamas College data - Charles Adams, Registrar, Clackamas Community College Office of Admissions
State Community College data - Dorothy Langley, State Department of Education, Business Auxiliary Services Statistical Services/School Finance

SUMMARY

Both Ta and the college itself have found that the predictive methods used previously has given results which are significantly higher than the actual figures. This method has assumed a positive growth of 4 percent per year for the same class (e.g. K-1-2-3-etc.) and 11 percent per year growth of class size (e.g. 1968-ninth grade growth by 11 percent to 1969-ninth grade).

The class sizes were then predicted to 1980. The college then estimated their enrollment at the rate of 25 percent of the ninth through twelfth grade enrollment for that year.

Ta has thoroughly analyzed the actual A.D.M. enrollment figures of the Clackamas Community Intermediate Education District for kindergarten through twelfth grade during the period 1966-72. 1966 was chosen to coincide with the opening of Clackamas Community College. Ta's cohort-survival analysis showed class growth rates ranging from a decline of one percent to an 8 percent increase per year for grades 1 through 8. The mode was a growth rate of 4 percent per year.

Growth progressions for grades 9 through 12 showed, at best, zero growth rates per year. Most of the figures showed declines in class size. This is an anomaly considering the first through eighth grade growth and the continuing population growth of the county during the same period. Possible explanation for this decline may be an out-migration of families with children 15 to 18 years of age, those over 15 leaving school for work, marriage or other reasons and finally

families sending their high school aged children to parochial or other private schools.

These declining rates of growth cannot then be used to predict the enrollment at the community college as the college enrollments during the 1966-72 period were increasing. Ta found no repeatable correlations between either ninth through twelfth grade totals or twelfth grade graduates and the following year's enrollment at the college either in college total or freshman class totals in FTE or headcount. The reason for this is beyond the scope of this study, but must include such items as varying numbers of seniors either not going directly to college or putting college off for 3 to 4 years. The waiting period may be for work, marriage, military service, etc. Additionally, many Clackamas students choose to go elsewhere for higher education.

If no repeatable correlations exist, then 25 percent of ninth through twelfth grade enrollment is invalid as a predictor of college enrollment and should not be used.

Since the cohort-survival technique shows no progressions to the college enrollment and no correlations with college enrollment exist, other methods of analysis must be explored. Because Clackamas County has shown steady growth over the past two decades and no barriers to further growth such as geographic or density restrictions are expected in the near future, it would not be possible to either predict enrollment size nor capacity limits based upon county population. Additionally, no correlation exists between county growth and college population.

Ta then analyzed the relationship between FTE and headcount for each of the 13 community colleges in Oregon. The headcount, FTE and FTE/headcount ratio for each of the colleges' Fall Term is shown in Table 1. 1963-64 was the first year these figures were available from the Oregon State Department of Education.

The ratios for the entire State System represent the 50th percentile score for the entire array of scores. The state ratio shows no specific growth pattern due to the unequal yearly growth rates of the FTE and headcount figures. The state figures have shown a constant upward growth. The ratios for the individual colleges show no particular patterns particular to either older, established institutions such as Central Oregon or newer institutions such as Mt. Hood or Umpqua.

For Clackamas College, two relationships are noted which will allow us to predict headcount and FTE enrollment for the Fall Quarter. The first is that the headcount for the Fall Quarter at Clackamas has been between 5.20 percent and 6.14 percent of the State System total. These

figures are shown in Table 2. The average of these figures is 5.68%. Since the State Educational Coordinating Council's projections of Community College headcount is historically as much as 10% in error, a linear progression to 1980 based on 1967-68 to 1972-73 data is at least as valid. Table 3 shows the projection of system headcount to 1980 and then 5.68 percent of the total which gives the projection of Clackamas' headcount.

The system headcount for each fall term was projected using the linear regression method of least squares. The basic data for this analysis was from Table 1 and is:

Year	Headcount
1	31,473
2	35,692
3	47,127
4	55,513
5	62,892
6	67,073

On a yearly basis, as actual data becomes available, projections can be modified by including the actual data in the computations. Additionally, as actual ratios of Clackamas headcount to system headcount become known, the average ratio (presently 5.68%) can be calculated using a larger number of actual figures. Hence, a moving average is developed which becomes modified yearly.

The second relationship for Clackamas College which is noted in Table 1 is the ratio FTE/headcount. The ratios for the fall terms 1967-68 through 1972-73 show a low first year ratio and then the remaining ratios all falling within a narrow range. This pattern is also evident in one other new college, Linn-Benton, which opened in 1967. The fall term figures shown represent approximately 33% of the annual FTE.

The narrow range of ratios for Clackamas College is significant. Being more narrow than most of the other colleges, which vary in a more random pattern, would show that the enrollment ratios at Clackamas are more constant and hence predictable than at the other institutions. By averaging the past four years' ratios, a projection of this ratio was made. The projection is based on an average ratio of 0.1716. Using the projected ratio and the projected headcounts, fall term FTE projections for the years through 1980-81 can be deduced. These figures are shown in Table 3.

As with the headcount projections, the fall term FTE projections must

be modified on a yearly basis. The FTE/headcount ratios from the school year 1969-70 on, must be included in a moving average to arrive at a more accurate ratio for future predictions. After this new figure is determined, the next year's fall term FTE can be modified for a more accurate result. It is important to note that all FTE figures are for reimbursable FTE.

After projecting fall term figures, the next logical step would be to then project winter, spring and summer term data. This task proved impossible based upon the data supplied to Ta by Clackamas College. No progressions or correlations were found to exist for either headcount or FTE when comparing the fall-winter, winter-spring or even fall-spring terms. There exists neither a growth-decline pattern nor a relationship of the magnitude of the growth or decline figures.

An analysis of headcount data for each term between term data and state totals is impossible at this time. The State Department of Education collects headcount figures twice per year; once for the fall term and once for yearly totals. A future study of the term relationships can be made by collecting the data from the registrars at each of the 12 other colleges in the State. The constraint of time prevents that task from being accomplished in this study.

In order to make predictions for Clackamas College beyond those made for the fall term, an analysis of winter and spring term FTE data was made.

The basic data for winter and spring quarter projections are given in Tables 4 and 6 respectively. The method used for these quarters is similar to that used for the fall quarter. Ratios are determined between college and State FTE and between the college's FTE and headcount figures.

For both quarters State FTE is projected using the method of least squares based on historical data for the respective quarters. The State FTE projections are then multiplied by a factor to arrive at the yearly college FTE enrollments. These projections are seen in Tables 5 and 7. This factor is an arithmetic average of the historical Clackamas FTE/State FTE ratios. Clackamas headcount projections are arrived at by dividing FTE projections by the factors shown in Tables 5 and 7. These last factors are the arithmetic averages of historical Clackamas FTE/Clackamas headcount ratios.

The accuracy of these calculations is seen when comparing the winter quarter actual FTE (609) to the projected winter quarter FTE (618). The numerical difference is 9 FTE or 1.5 percent. As with fall quarter

projections, all averages and projections using the least squares method must be updated yearly with actual data. In this manner both short-term and long-term variations can be accounted for and adjusted for.

While the amount of data used in this report may seem voluminous at first, this report serves to point out how undescriptive of the college population the present data actually is. Simple totals of student population are obviously not sufficient to allow accurate predictions.

RECOMMENDATIONS

1. *An in-depth study to determine the reasons for the apparent discrepancy between K-8 growth and 9-12 decline should be recommended to the Intermediate Education District.*

2. *An in-depth study to determine the profile of the existing student body each quarter should be conducted. The factors within this profile must be determined on an on-going basis. Such items as male-female, high school of origin, work experience, single/married, hours enrolled, as examples must not only be singly determined, but must be cross-referenced. As a program is designed to collect and collate this information, enrollment projections will become easier to make and inherently more accurate.*

3. *A continuous review of the projections be made each quarter and the knowledge obtained from this study be distributed among college administrators, and some members of the Master Plan Steering Committee.*

TABLE 1

ACTUAL FALL QUARTER ENROLLMENTS

Oregon Community Colleges	Date Established		63-4	64-5	65-6	66-7	67-8	68-9	69-70	70-1	71-2	72-3
Blue Mountain	1962	FTE	103	153	201	201	248	279	327	364	395	354
Pendelton		HC	384	462	648	750	946	1008	1150	1411	1554	1549
Ratio (FTE/Head Count)			.2682	.3312	.3102	.2680	.2672	.2768	.2843	.2580	.2542	.2284
Central Oregon	1949	FTE	155	167	240	232	222	262	300	333	372	375
Bend		HC	661	691	865	878	938	1075	1342	1625	1906	2260
Ratio (FTE/Head Count)			.2345	.2417	.2755	.2642	.2367	.2437	.2235	.2049	.1952	.1659
Chemeketa	1955	FTE	138	214	224	274	344	352	423	530	691	833
Salem		HC	745	1001	1488	1265	1767	1993	2633	3569	4407	5295
Ratio (FTE/Head Count)			.1852	.2138	.1505	.2166	.1947	.1784	.1607	.1485	.1568	.1573
Clackamas	1966	FTE					176	313	445	566	629	688
Oregon City		HC					1638	2067	2705	3174	3562	4117
Ratio (FTE/Head Count)							.1074	.1560	.1645	.1783	.1766	.1671
Clatsop	1958	FTE	105	114	168	191	231	220	201	261	286	291
Astoria		HC	658	796	860	778	1098	1046	1098	1510	1958	2032
Ratio (FTE/Head Count)			.1596	.1432	.1953	.2455	.2104	.2103	.1831	.1728	.1461	.1432
Lane	1965	FTE	231	253	478	744	975	1265	1549	1765	1826	1614
Eugene		HC	1173	1293	2825	4398	5269	5964	9520	11016	8755	8300
Ratio (FTE/Head Count)			.1969	.1957	.1692	.1692	.1850	.2121	.1627	.1602	.2086	.1945
Linn-Benton	1967	FTE					96	217	351	469	549	589
Albany		HC					1169	2073	2885	3474	3531	4094
Ratio (FTE/Head Count)							.0821	.1047	.1217	.1350	.1555	.1439
Mt. Hood	1965	FTE				152	458	719	1038	1389	1736	1756
Gresham		HC				822	3429	4287	6528	7931	9602	9732
Ratio (FTE/Head Count)						.1849	.1336	.1677	.1590	.1751	.1808	.1804
Portland C.C.	1961	FTE	279	640	1058	1352	1697	1869	2352	2911	3155	3212
Portland		HC	3774	6711	8196	9148	10755	11027	14333	16506	21388	22780
Ratio (FTE/Head Count)			.0739	.0954	.1307	.1478	.1578	.1695	.1641	.1764	.1475	.1410
Rogue	1971	FTE									168	217
Grant's Pass		HC									1047	1058
Ratio (FTE/Head Count)											.1605	.2051
Southwestern Oregon	1961	FTE	155	220	231	280	283	299	316	414	435	391
Coos Bay		HC	867	1261	1747	1463	1776	1423	1762	2001	2198	2683
Ratio (FTE/Head Count)			.1788	.1745	.1852	.1914	.1593	.1555	.1793	.2069	.1979	.1457
Treasure Valley	1962	FTE	95	151	259	397	371	376	365	395	332	302
Ontario		HC	539	664	998	1487	1510	1609	1613	1458	972	993
Ratio (FTE/Head Count)			.1763	.2274	.2595	.2670	.2457	.2337	.2763	.2709	.3416	.2041
Umpqua	1964	FTE		54	111	163	188	252	291	345	360	331
Roseburg		HC		512	812	957	1178	1520	1558	1838	2012	2180
Ratio (FTE/Head Count)				.1055	.1367	.1703	.1596	.1658	.1868	.1877	.1789	.1518
Total FTE			1261	1966	2970	3986	5289	6423	7958	9742	10934	11014
Total HC			8295	13391	18039	21946	31473	35692	47127	55513	62892	67073
Total Ratio (FTE/Head Count)			.1520	.1468	.1646	.1816	.1680	.1800	.1689	.1755	.1739	.1642
Clackamas Head Count (% of State Total Head Count)							.0520	.0562	.0574	.0572	.0566	.0614

Source: State of Oregon Department of Education
Williams-Kuebelbeck & Associates

Table 2

FALL QUARTER HEADCOUNT DATA

	1967 - 68	1968 - 69	1969 - 70	1970 - 71	1971 - 72	1972 - 73
Clackamas Community College Headcount	1,638	2,007	2,705	3,174	3,562	4,117
Oregon State Community Colleges Total Headcount	31,473	35,692	47,127	55,513	62,892	67,073
Clackamas Headcount/ Total (%)	5.20	5.62	5.74	5.72	5.66	6.14

Source: Clackamas Community College, Office of Admissions.

State of Oregon Department of Education

Williams-Kuebelbeck & Associates, Inc., Redwood City, California

Table 3

FALL QUARTER PROJECTIONS

	1973 - 74	1974 - 75	1975 - 76	1976-77	1977 - 78	1978 - 79	1979 - 80	1980 - 81
State Total Headcount	76,761	84,418	92,075	99,732	107,389	115,046	122,703	130,360
Factor (0.0568)	.0568	.0568	.0568	.0568	.0568	.0568	.0568	.0568
Clackamas College Headcount	4,360	4,795	5,230	5,665	6,100	6,535	6,970	7,404
Factor (0.1716)	.1716	.1716	.1716	.1716	.1716	.1716	.1716	.1716
Clackamas College FTE	748	823	897	972	1,047	1,121	1,196	1,271

Source: Williams-Kuebelbeck & Associates, Inc., Redwood City, California
Clackamas Community College, Office of Admissions
State of Oregon Department of Education

Table 4

WINTER QUARTER REIMBURSABLE FTE AND HEADCOUNT DATA

	1967 - 68	1968 - 69	1969 - 70	1970 - 71	1971 - 72	1972 - 73
Clackamas FTE	168	268	411	599	591	609
State FTE	4,528	5,589	6,908	8,709	9,841	
Ratio Clackamas/State	.037	.048	.059	.069	.060	
Clackamas Headcount	1,685	1,972	2,871	3,418	3,571	
Ratio Clackamas FTE/ Headcount	.100	.136	.143	.175	.165	

Source: Clackamas Community College

Oregon State Department of Education

Williams-Kuebelbeck & Associates, Inc., Redwood City, California

Table 5

WINTER QUARTER REIMBURSABLE FTE PROJECTIONS

	1972 - 73	1973 - 74	1974 - 75	1975 - 76	1976 - 77	1977 - 78	1978 - 79	1979 - 80	1980 - 81
State FTE	11,240	12,615	13,990	15,365	16,740	18,115	19,490	20,865	22,240
Factor (0.055)	.055	.055	.055	.055	.055	.055	.055	.055	.055
Clackamas FTE	618	694	769	845	921	996	1,072	1,148	1,223
Factor (0.155)	.155	.155	.155	.155	.155	.155	.155	.155	.155
Clackamas Headcount	3,987	4,478	4,962	5,542	5,942	6,426	6,917	7,407	7,891

Source: Clackamas Community College
Oregon State Department of Education
Williams-Kuebelbeck & Associates, Inc., Redwood City, California

Table 6

SPRING QUARTER REIMBURSABLE FTE AND HEADCOUNT DATA

	1967 - 68	1968 - 69	1969 - 70	1970 - 71	1971 - 72
Clackamas FTE	141	251	381	559	537
State FTE	4,175	5,335	6,571	8,119	8,896
Ratio Clackamas/State	.034	.047	.058	.069	.060
Clackamas Headcount	585	1,477	2,887	3,219	3,455
Ratio Clackamas FTE/ Headcount	.241	.170	.132	.174	.155

Source: Clackamas Community College
Oregon State Department of Education
Williams-Kuebelbeck & Associates, Redwood City, California

Table 7

SPRING QUARTER REIMBURSABLE FTE PROJECTIONS

	1972 - 73	1973 - 74	1974 - 75	1975 - 76	1976 - 77	1977 - 78	1978 - 79	1979 - 80	1980 - 81
State FTE	10,288	11,511	12,734	13,957	15,180	16,403	17,626	18,844	20,072
Factor (0.054)	.054	.054	.054	.054	.054	.054	.054	.054	.054
Clackamas FTE	556	622	688	754	820	886	952	1,018	1,084
Factor (0.158)	.158	.158	.158	.158	.158	.158	.158	.158	.158
Clackamas Headcount	3,519	3,937	4,354	4,772	5,190	5,607	6,025	6,443	6,861

Source: Clackamas Community College
Oregon State Department of Education
Williams-Kuebelbeck & Associates, Inc., Redwood City, California

TRAINING

SUMMARY

Training emphasis of this study has been on two areas: (1) Training of selected administrative staff and projections, master planning processes, and facility planning; and (2) training of master plan steering committee members in the group facilitation process. It is believed that the training program in both areas will enable Clackamas Community College to continue the master planning effort now begun. During all training, it has been emphasized that long-range planning is a continuous process, and needs to be on-going, particularly in view of the many technological and human changes taking place in education today.

The training of the administrative staff has included selection of data for enrollment projections, methods of enrollment projections, improving communication between administration and other members of the college community, development of planning guidelines, and educational programming development. The consultants believe the staff should have the necessary resources now to supply normal technical assistance for master planning, with special assistance from outside consultants on innovative, current planning ideas and concepts.

A training program in the group facilitation process was held in January with fifteen persons in attendance, including eight members of the master plan steering committee and seven administrators. Evaluation of that session has indicated good results were obtained and the process is being used in other meetings being held on the campus. A workbook, "Meetings, Meetings, Meetings", has been distributed to each of the participants and additional copies are available.

All the members of the Master Plan Steering Committee should now be familiar with the process used, the results to be expected, and the advantages and disadvantages of this type of process, and future of the committee.

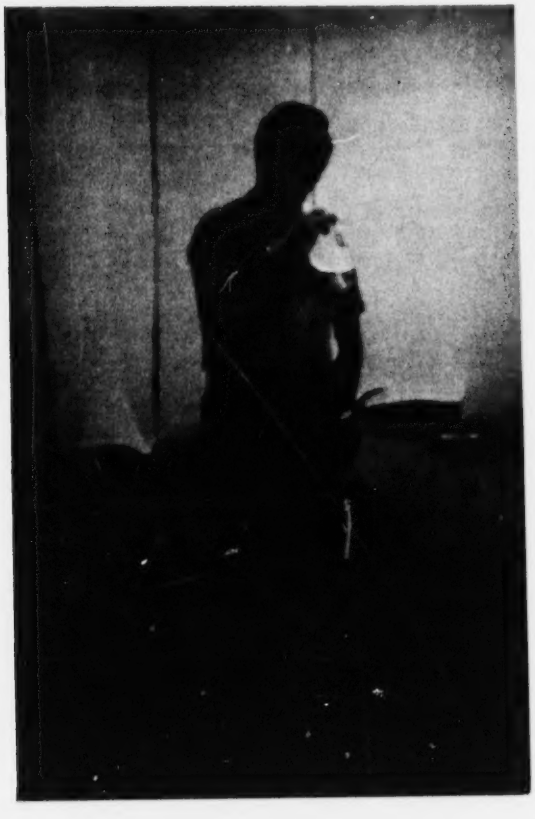
RECOMMENDATIONS

1. *After practice at facilitation, members who underwent training should be urged to continuously expand knowledge of the process to other members of the faculty, students, administrators, classified personnel, and community representatives. Expansion of the process could have excellent future results in teaching,*

personal interactions, and college administration.

2. *Continuous review of the enrollment projections be done each quarter and the knowledge obtained from this study be distributed among college administration and the master plan steering committee.*

3. *All future in-service faculty training programs include an element of group facilitation processes. The improvement of teaching techniques will greatly enhance the overall benefits to the students, the faculty themselves, and the reputation of Clackamas Community College.*



LONG-RANGE FACILITIES PLANNING

The planning of long-range facilities should be undertaken in cooperation with the master plan steering committee, through the use of the director of facilities planning. All recommendations made here in this regard should be evaluated as part of the Master Plan Committee's deliberations as they proceed.

SUMMARY

Upon settlement of the location of the Community Center Building, the attention of Thompson Associates has turned to the future construction plan for the campus. Based upon the enrollment projections, it appears at this time that additional facilities will not be needed for several years. By carefully monitoring space needed and allowing for alterations in the existing spaces, the existing facilities should be adequate.

RECOMMENDATIONS

The following recommendations are all based upon careful analysis of the programs and enrollment projections. Any changes in these programs or enrollment figures should necessitate an immediate review.

1. *A major administrative officer should be made responsible for assignment and usage of the facilities. This person should report directly to the President and have full control of the use of the facilities. Since this person will have the overall campus needs in mind, his recommendations should be strongly considered in all cases.*

2. *Prior to authorizing any architectural work in the future, a set of education specifications should be completed for the proposed facility. An exception to this recommendation might be the retention of an architectural/planning firm experienced in supplying both services. Very often, the combining of these services into one contract shortens total time required for facility planning, design and construction. In any event, the educational specifications should always be completed prior to architectural design being started.*

3. *The next major expansion projected for facilities requirements seems to be in the vocational and technical*

education areas. This should be a continuation of Barlow Hall as expressed in the original plan. However, care should be taken so that the needs for expansion are carefully considered. Consideration should be strongly given to using community facilities, particularly industrial facilities, whenever possible.

4. Due to the continual growth of publishing and the constant need for additional information, the library will need additional space also. Relocation of existing carrels and self-study units within the library may be the first items considered to be relocated. Eventually, a separate facility located close to the student center and possibly identical in design should be created. At that time, relocation of the bookstore into the same building should be strongly considered.

5. If funding became available after the above needs were satisfied, or if special grants became available, a cultural arts building should be planned. It should consist of three areas:

   a. Visual arts - this would include an art gallery, exhibit rooms, and possibly an audio-visual room.
   b. Music - this would include a concert hall of small capacity, individual practice rooms for self-study, and small rehearsal areas.
   c. Performing arts - this section could include stage, dressing areas, work shop rooms, dance studios, together with a theater available for use by all arts.

6. Consolidation of the chief administrative functions, such as the President, Assistant to the President, Dean of College Services, Grants & Special Projects Officer, and Director of Data Processing, within the college in one location should be considered. While not requiring much space at this time, the college growth will require additional business personnel and closer coordination between administrative officers.

7. General classrooms should be considered as low priority items after completion of the Community Center Building. Adequate facilities should be available through proper management of the existing spaces until later in the decade.

8. *A swimming pool facility, while perhaps a necessity to many people, should have a low priority in terms of facilities. Allocation of the financial resources of the college do not appear to permit expenditures for this program at this time. Construction of this type of facility is very expensive, especially in terms of its limited use for other purposes.*

LONG-RANGE
FACILITIES
PLAN

RECOMMENDED
FUTURE
CONSTRUCTION

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APPENDIX A

December 12, 1972

The Board of Trustees
Clackamas Community College
19600 Molalla Road
Oregon City, Oregon 97045

Dear Members of the Board:

This letter is a follow-up to our progress report dated December 1st and submitted to you earlier. The following is the result of our meetings and discussion during the past two weeks.

Based upon our efforts during the past six weeks, we have found these facts and reached the following conclusions, regarding the Community Center Building:

1. The building materials used in the original design, subject to minor exceptions, should be continued in any future building. These materials will be consistent with the existing structures and with local fire codes, as well as meeting Type I construction as discussed in our report.

2. Due to inflation, the money available in real terms for the project is decreasing approximately 1% per month.

3. The cost per square foot at the mid-point of construction (estimated May 1, 1974) should be estimated at $35 per square foot. Using this figure, and a construction budget of $1,050,000, the maximum square footage could be 28,500 square feet.

4. The Master Plan Steering Committee is presently in the process of revising the campus needs and specifications. These appear to be different campus needs now from the original specifications.

There appears to be emerging the following needs:

1. There appears to be a need for a Community Center and Student Services Building. A facility of this type is a needed asset for the entire college district, and especially the Oregon City area. Existing community facilities for large meetings of various community groups appear to be very limited.

2. There is a need for a facility to house the student services area, including student government, student lounging areas, and centralization of all student centered activities.

3. Many of the existing services are in facilities not originally designed to house them. For instance, the library is an area designed to be an instructional unit.

4. There appears to be a need for dining and recreation areas with specific functions and arrangements still under consideration.

Based on this information, we make the following recommendations:

1. The Architect/of/Record, Balsinger, Peterson & Associates, should be retained to redesign the Community Center Building.

2. Negotiations for this new contract with the architects should be concluded immediately so that the architects may be part of the planning effort presently underway.

3. The Master Plan Steering Committee concentrate their efforts for the balance of December on the Community Center Building needs, with periodic review of the design once it is commenced.

4. A review of the facilities long-range master plan be undertaken by the architects, to determine the effect of the revised Community Center on the plan.

5. A construction Budget of $1,050,000 be used, which will allow $263,000 for inspection costs, furnishings and equipment, fees and contingencies.

If the above recommendations are acceptable, we believe the State deadlines for submittal of preliminary drawings can be met, and State funding will be approved. We will be willing to participate in the architectural renegotiations, if you so desire, and will look forward to working with the committee, staff, and architect on the redesign.

Sincerely,

THOMPSON ASSOCIATES

Walter Thompson

Walter Thompson

WJT/jd

cc: Dr. John Hakanson

ta

Balsiger - Petersen & Associates
Architects A.I.A. / Planners

December 28, 1972

Mr. Bill Ryan
Dean of College Services
Clackamas Community College
19600 S. Molalla Avenue
Oregon City, Oregon 97045

REGARD: Fire Safety Inspection
Smuckers Building Complex

Dear Bill:

At the request of the College we performed a walk-through inspection of the two buildings referred to as the Smucker Complex. The buildings were analyzed from a fire safety standpoint in regard to the construction of the building and the safety of exiting occupants of the building in the event of a fire.

The first building utilized as a small maintenance office, warehouse and cabinet shop appeared to have some minor problems. These problem areas should be checked by the local Fire Marshal:

1. Upper floor at front end of building contains a conference room, a coffee room and an office. Occupancy of this area should be limited to a maximum 10 people unless there are two approved ways to exit area. There is one stairway up into the space and another door leading to an elevated portion of the warehouse which cannot be construed as an exit. This also applies to the large room on the second floor at the opposite end of the building.

2. The room used to store flammable liquids should have a door with a minimum 3/4 hour rating and automatic closure instead of the paneled door with the large clear glass glazing.

3. Cabinet Shop
   a. The cabinet shop should be separated from the warehouse by a one-hour fire resistive separation which includes a labelled fire door. This could create some problems to conform in strict compliance with the code and the Fire Marshal could possibly allow some latitude here.
   b. Equipment producing any combustible dust or fibers is required to have either an adequate dust collecting and exhaust system or a fire-

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extinguishing system.

c. There is a need for a door from the cabinet shop work area directly to the exterior which swings toward the direction of exit.

This covers the basic problems in building one with the exception that the upper balcony (built using the bottom chards of the trusses) should not be utilized for storage for several reasons which have been pointed out by the Fire Marshal.

Building two presents some serious problems from a standpoint of the Building Code. Harold Chapin stated the Fire Marshal had tentatively approved this building for use which may relieve the college of some responsibility. However, if one approaches the construction and occupancy from a straight Building Code standpoint there are some major problems.

The building falls into a type C occupancy consisting of two floors with an occupant load of in excess of fifty per floor. The building is of type V.N construction or wood frame with either exposed structural members or non-rated wall coverings. The code will not allow this occupancy in a two story building unless it is of one-hour construction or other conditions relating to exiting and protection of structural members supporting second floor are met.

The upper floor is served by two stairways which exit through the lower floor to the exterior. Although a solid core door was used at the upper floor, this area should be enclosed from the work area on the lower floor. This could be done by enclosing the stairway with wood studs and 5/8 type "x" gypsum board with a solid core door into the lower floor area. Both the door at the lower floor and the door to the exterior should swing outward in the direction of the exit. The critical problem here is that if a fire breaks out on the lower floor, occupants of the upper floor could possibly be prevented from using either exit and the fixed windows in the classrooms are not adequate to use as a means of exiting.

Harold Chapin stated the kiln would be located outside this building and that burning or firing of any material would not be done in the building. This should be strictly adhered as the existing construction would support combustion quite rapidly. If one could put a priority on work required to make the building conform to the intent of the Code it would take this order:

1. Install exit doors to the exterior which swing in the direction of exit with proper hardware and enclose the stairway from the lower floor with one hour construction.

2. Apply 5/8 type "X" gypsum board to all exposed wood structural members both wall and ceilings on the lower floor.

3. Install some operable windows on the second floor which would not only allow some ventilation but also provide an "emergency exit" in case of blockage of the exits leading from this floor.

While not making the building comply to the strict letter of the code, it would come closer to protecting the occupants and allow a greater time for exiting in the event of a fire.

This covers the basic Building Code problems which are in non-conformance. The Fire Marshal may find other ones relating to a fire alarm system and fire extinguishers but for the main part the minor violations will result in protection of the building rather than protection of the occupants in the event of a fire.

The Fire Marshal may have other thoughts in regard to some of these items. Since he is the final authority in enforcing the Code, his decision should prevail.

Sincerely,

BALSIGER - PETERSEN & ASSOCIATES

Ronald J. Shewbridge

Ronald J. Shewbridge, AIA

RJS/s

PLANNING MATRIX

PHASE	BY WHOM	HOW MANY	METHODS	WHEN	WHERE	FROM WHERE
I Define Needs						
II Prioritize Needs						
III Translate Needs into Goals/ Objectives						
IV Develop Strategies						
V Allocate Resources						
VI Decision Making						
VII Implementation						
VIII Evaluation						
IX Revision						